ARTICULATION ERRORS IN PRONUNCING INDONESIAN WORDS CONTAINING CONSONANT CLUSTERS

(THE STUDY OF THREE CHILDREN AGED 4-5 WHO HAVE JAVANESE BACKGROUND)

A THESIS

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The writer states that this thesis was submitted without taking research material from the material which is already in a university, and as far as the writer believes and knows this thesis also does not take other material from publications or writings, except those that have been appointed from the reference.

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ABSTRAK

Tujuan penulisan skripsi ini adalah untuk mengetahui kemampuan anak mengucapkan bunyi–bunyi konsonan rangkap dan menjelaskan bentuk kesalahan artikulasi yang muncul pada pengucapan bunyi konsonan rangkap. Skripsi ini merupakan studi kasus pada tiga orang anak yang berusia antara 4-5 tahun. Penelitian ini menggunakan jenis penelitian deskriptif. Sampel berupa ucapan atau kata yang mengandung klaster /str/,/pr/,/kr/,/sp/,/tr/,/st/,/pl/,/br/,/kl/,/kw/. Dengan demikian pengambilan sampel ini menggunakan *purposive sampling*. Dalam mengumpulkan data, penulis menggunakan tes artikulasi dengan menggunakan 3 kata untuk masing- masing bunyi konsonan rangkap. Dalam penelitian ini penulis menemukan bahwa kemampuan anak yang berusia 4-5 tahun untuk mengucapkan bunyi konsonan rangkap secara umum masih tergolong rendah. Di antara bunyi konsonan rangkap, /pl/ dan /kl/ adalah konsonan rangkap yang paling mampu diucapkan, sedangkan bunyi konsonan rangkap yang paling sulit diucapkan adalah klaster yang mengandung /r/. Dari empat jenis kesalahan - *Substitution, Omission, Distortion* dan *Addition – Distortion* tidak muncul dalam ucapan-ucapan respondent. Kesalahan artikulasi yang paling banyak muncul pada pengucapan konsonan rangkap adalah *Omission,* sedangkan *Substitution* hanya muncul beberapa kali. Kesalahan artikulasi yang paling sedikit muncul pada pengucapan konsonan rangkap adalah *Addition*. Dari penelitian ini terdapat satu jenis variasi kesalahan artikulasi yang tidak disebut dalam teori yaitu *Addition- Omission*.

CHAPTER 1

INTRODUCTION

A. Background of Study

The writer is a daughter who has not got any sisters or brothers. There is nobody else at home except her parents and a servant. The chance to talk with her parents is very limited. Such a chance usually comes only in the evening because they must work everyday, even on the weekends.

Thus, she spends her spare time with her cousin's sons and daughter who are children at about 4 years old and live near my house. They are interesting as they are cute, pure, and expressive. However, what interests her most is their pronunciation; perhaps this is because she studies linguistics and is most interested in Phonology.

Listening to their pronunciation, she hears that their articulation is still not perfect yet. According to Patterson & Wright cited in Pearson Allyn Bacon Prentice Hall by Otto (1990:1), articulation disorders happen to the children who are 3 years old. Quite often people around them cannot understand their obscure speeches, which are still occurring until they are at the age of 8 years old. In other words, interaction in oral communication to convey their message or feeling has a chance of disorder which frequently happens in their articulations. The thing that is often caught by the writer is the difficulty in pronuncing words which consist of consonant clusters, that is, sequence of consonants that appear in a syllable without a vowel between them. For example, they delete one consonant or change one consonant of the cluster into another one, for instance /**t?**mp?t/ or /**tl?**mp?t/ instead of /**tr?**mp?t/ (trumpet). Due to the phenomenon, the writer would like to study the articulation errors made by children aged 4 to 5 who have the Javanese background language in pronuncing Indonesian words containing consonant clusters.

Moreover, this topic has never been written by students of Diponegoro University majoring in Linguistics. There are some similar topics such as the ability and articulation errors in pronuncing bilabial consonants and vowel produced by autistic children.

The objects of this study are pronunciation of normal children aged 4 – 5 who have Javanese background. Stoel-Gammon (1987) stated that numerous vowel errors, frequent deletion or initial consonant, use glottal stop or [h] for several consonants, and backing. For example [ku] for "two", also final consonant deletion particularly as the child approaches 3 years". It is being the research problem for the writer. The researcher is going to find the sign of errors in children at four up to five years old for consonant especially consonant clusters. The writer is going to observe their pronunciation in order to find out their ability in their Indonesian pronunciation containing clusters. Then she is going to describe their articulation errors, to identify the types of the errors, and to try finding clusters, which are mostly difficult to pronunce by them. The writer feels that this study may be useful for speeding up the development of children's pronunciation.

B. Purpose of Study

The following are the aims of doing this research:

1. The writer wants to describe and analyze the errors made by the children aged 4-5 with the Javanese language background in pronuncing words which is chosen as a sample words also identify the cause of errors..
2. To find out errors in their cluster pronunciation which frequently occur.
3. To identify and justify that language acquisition for children is universal

C. Scope of Study

In order to concentrate on the object of the study, the writer decides the scope of the study conducted. In this research, she is going to find out, describe and analyze the errors made by three children in pronuncing Indonesian words containing consonant clusters. This research belongs to study for three children as it concerns only three children – Adinda Berliana, Flavio Putra, and Orshid Ranendra – aged – 5 years 2 months, 4 years 6 months, and 5 respectively. They are the writer's nephews and niece who live close to her home, so that she can directly and frequently observe the development of their pronunciation.

D. Underlying Theory

According to Waring, Fisher, Atkin in *American Speech-Language-Hearing* written by McLeod & Bleile (2003:8), children who are 4 years - 4 years and 11 months old have an ability to produce consonant clusters correctly with the percentage of 88.1%. Meanwhile, Templin in the same journal (2008:9) maintains that children aged 5 can produce most of consonant clusters, namely: /tw,kw,sp,st,sk,sm,sn,pl,bl,kl,gl,fl,pr,br,tr,dr,kr,gr,fr,str/. However, Smit, et al., (2003:9) said that the ability between boys and girls to produce words containing consonant clusters is different. In producing consonant clusters, girls are better than boys. The girl of 5 years old has an ability to produce 13 types of clusters, namely: /tw,kw,sp,st,sk,sw, pl,bl,kl,gl,fl,kr,skw/, whereas the boy produces only 8 types clusters, namely : / tw,kw,sp,st,sn,bl,gl,dr/.

Articulation is an essential thing in communication especially in verbal communication. Articulation means making of speech sounds. If the impairment of articulation happens, communication cannot run well because words, which consist of speech sounds, are not pronounced appropriately. The error occurs in the beginning position in words or it can also occur in the middle and final position.

There are four kinds of basic articulation error in pronuncing words based on Heward, W.L, (2006:310-314) namely: Distortion, Substitution, Addition, and Omission.

Distortion is a type of error made by changing original speech sounds into speech sounds which are like the intended speech sounds than other speech sounds. The sound may be inaccurate, but it still sounds something like the intended sound. For example, the words "**sl**eep" is pronounced as "**schl**eep". Substitution is an articulation error in which a standard or non-standard speech sound replaces the correct speech sound. For example, the word /**k**upu/ becomes /**t**upu/. Thus /k/ is replaced by /t/. The third is Addition, that is, an articulation error in which a speech sound or an extra sound is added. The word /**str**?b?ri/, for instance, becomes /**s?tr**?b?ri/; thus, /?/ is inserted between /s/ and /t/. The last is Omission, an articulation error in which a speech sound in a word is not pronounced. For example, /**k**ucI?/ becomes /ucI?/; /k/, in this case, is deleted.

E. The Organization of Writing

The writer organizes this thesis into five chapters.

1. Chapter I

   This chapter discusses the background of the study, the research problem, the scope of the study, the purpose of the study, the underlying theories, and the organization of the writing.

2. Chapter II

   This chapter provides some theories that support the analysis of the data and describe the previous study.

3. Chapter III

   In this chapter, the writer describes the research method, namely the type of the research, the population and the sample, the method of collecting data, the technique of collecting data and the method of analyzing data.

4. Chapter 1V

   In chapter IV, the writer describes and analyzes the result of the study.

5. Chapter V

   In the last chapter, the writer draws the conclusion of the research.

CHAPTER II

LITERARY REVIEW

This research tend to the previous study has ever been written by Soenjono Dardjowidjojo (2000:113). His study is about language acquisition to Echa and Dhira. They are his grandchild. In the result of his study says that the order of appearance of this speech sound is genetic and developmental biology because it is not the same and the speech sound can not be measured by calendar year or month, for example Echa able to pronounce / r / at age 4:9 but Dira was to pronounce the sound of this at the age of 3:0. My research is about, if the previous studies examining the acquisition of sound / r /. I will examine the consonant especially the consonant clusters.

A. Language and Speech Development of Children

1. Definition of Language

Language is a system of arbitrary vocal symbols used by society to communicate and interact one another based on their culture (Dardjowidjojo, 2003:16). Thus, language is primarily spoken and it has a system. Infants try to communicate with adults by producing sounds which cannot be called language because their language still does not have system yet. The sounds develop bit by bit, while their body and mind are developing, until their sounds are similar to adults'.

2. Language Development

It is always interesting to learn how babies, who have no language at all, gradually develop their ability to speak, which is considered innate, from 'foreign sounds' to their first language speech sounds and then finally to understandable utterances which are similar to those of adults. According to Swartz (1983) cited in Holf (2003:124), language development in children is divided into five stages.

a. 0-12 months. Speech sounds appear gradually. This period, which is called **prelinguistic**, starts with babbling and ends with their first words. "Prelinguistic period ends when children produce their first words, and at that point what could be term the linguistic period begins "(Holf, 2003:123). The following is the detailed development:

(1). Reflexive Crying and Vegetative Sounds.

Since infants get born, they produce sounds movement (crying, burping, sneezing, and making a few other sounds). These unsystematic sounds, that they make, will later be used to produce speech sounds of their first language.

(2). Cooing and Laughter.

Infants start cooing at 6 to 8 weeks of age. They are not talking yet, but the features of speech sounds are present in vocalizations.

(3). Vocal Play.

At around 16 weeks until 30 weeks, babies can produce consonant and vowel sounds gradually.

(4). Reduplicated (canonical) babbling.

At around 6 months until 9 months, an infant begins to babble.

(5). Nonreduplicated babbling.

In this stage, the numbers of consonants and vowels infants produce increases; even they can combine consonant + vowel and consonant +vowel + consonant.

b. 12-18 months. Children are able to produce units of speech sounds, not individual sounds, to represent words. This period is called **prerepresentational** phonology.

c. 18 months – 3 years. Children develop phonological processes that change the target sounds in systematic ways to adapt to their limited articulatory abilities. In addition, their utterances start to be consistent in this period which is called **representational period.**

d. 4-7 years. In **Phonetic inventory completion period**, children are able to produce multisyllable words. They start to produce the target speech sounds which they could not pronounce before. They also start to apply the morphophonological rules, such as the formations of the past tense and plural.

e. 7-12 years. Children's cognitive development and acquisition of literacy improve awareness of understanding in the relation between sounds and meaning. This period is called **advanced phonology**.

B. Articulation

1. Definition of Articulation

Human can express their ideas or feeling by producing words which need articulation. Meanwhile Hornby states that articulation is making of speech sounds (1995:57). Furthermore Ramelan defines articulation in detail; he says that articulation is the act of moving two articulators (of the lower margin and of the upper margin) toward each other for the obstruction of the out going air (1994:21).

2. Difference between Articulation (phonetics) and Phonological Disorder

Thoughts can be expressed through speech. It has two levels, namely phonetic or articulation and phonemic or phonological (Bowen C., 2002). Caroline Bowen, a certified practicing member of Speech Pathology Australia and a fellow of the American Speech-Language-Hearing Association, mentions in her article about *The difference between an articulation disorder and a phonological disorder* at www.speech-language-therapy.com/phonetic_phonemic.htm, that phonetic (articulation) level is related to the act of producing vowel and consonant, while phonemic (phonological) level is related to the pattern of organizing speech sound. The two kinds of disorders occur when children continue the error past the expected age in which children should make speech sounds (either in phonetic or phonological level) correctly (2002:4).

Children with articulation disorders have difficulty at phonetic level, that is, they have trouble to produce the individual speech sounds (2002). In brief, articulation (phonetic) disorder is defined as a disorder that affects the phonetic level (2002). It may be substitution, omission, addition or distortion. For example, the word “banana” is produced as “nana”. The word is produced by leaving out some sounds. These kinds of disorder happen to children and grow up until they become adult. This is may occur because of the motor nerve abnormalities while articulation error happen since the combination and co-ordination of movements, by the relevant parts of the vocal apparatus, for the production of a given linguistic sound is not run well.

On the other hand, children with a phonological disorder typically have difficulty with rules and patterns for sound production (2002). For instance, children change all sound produced in the back position of the mouth, e.g /k/ in /kupu/ into sounds produced in the front position, like /t/ in /tupu/. This is concerned with pattern of sound errors. Another rule of speech sounds is that some words start with two consonants, for instance “**br**oken” and “**sp**oon”. The fact is that some children do not follow the rule of speech sounds that begin with two consonants. Instead, they say only one of the sounds: phonological disorder refers to the rule or pattern of speech sounds “**b**oken” and “**p**oon” respectively.

The writer defines articulation and phonological disorder to describe the difference between both of them clearly. However, in this thesis she will only describe articulation error made by children aged 4 to 5. She will not discuss whether the errors belong to one of the two categories.

3. Differences of Articulation Errors and Articulation Disorder

Articulation Errors

Julie A. Daymut, M.A., CCC-SLP stated that articulation errors generally occur in children who are learning language. Articulation errors can occur because of an error in producing the sounds of language. Bauman-Waengler (2000) also says that articulation errors are characterized by the omission, distortion, substitution, addition and/or incorrect sequencing of speech sounds. Errors based on Motorically are usually occur and consistent. Since the sounds produced are notably different from normative productions, errors are described as 'phonetic' in nature. While articulation disorder based on Bauman- Waengler (2000) may be functional or organic in etiology. Functional articulation disorders exist in the absence of any apparent cause and are related to deficiencies in the relatively peripheral motor processes.

C. Language and Speech in 5 -Year- Old Children

Children have the competence of language since they were born, and it develops together with the increasing age. Children who are two years old have restricted ability to speak. However; at the age of 5, they have ability to produce some complex sentences which later on are like those produced by adults.

> Two-year-olds' conversational skills are limited. Five-year-old children are producing long, complex sentences…and maintaining a topic for several turns. In a few short years, children move much closer to the adult level of linguistic and communicative competence (James, 1990:74).

The following are the characteristics of children of 5 years old based on language development stated at http://www.childdevelopmentinfo.com:

1. They can use descriptive words (adjective and adverbs) spontaneously.

2. They know common opposites, for example: big-little, hard-soft and heavy-light.

3. They have a number of concepts of 4 or more.

4. They are able to count to ten.

5. Their speech should be completely intelligible, despite articulation problems.

6. They should have all vowels and the consonants /m/,/p/,/b/,/h/,/w/,/k/,/g/,/t/,/d/,/n/,/ ? /, and /y/.

7. They should be able to repeat sentences.

8. They should be able to define objects they usually use (hat, shoe, and chair).

9. They should be able to follow 3 kinds of commands given without interruptions.

10. They should know his/ her age.

11. They should have simple time concepts (morning, afternoon, night, tomorrow, and today).

12. They should be able to use long sentences, some compound, and some complex sentences.

13. Their speech on the whole should be grammatically correct.

The writer would like to focus on point 6 saying that children of 5 years old still have articulation problems. It seems that they are universal.

D. Types of Articulation Error

W.L Heward, a Professor Emeritus (2006:310-314) in his article "Characteristic of Children with Communication Disorders" categorizes speech sound errors into four types, namely; Distortion, Substitution, Omission and Addition.

1. Distortion

Distortion is type of articulation error in which a speech sound is more like the intended speech sound than other speech sound but is noticeably wrong. The sound may be inaccurate, but it still sounds something like the intended sound. There is an attempt to make a sound but it is misarticulated. For example, children produce the word "**sl**eep" becomes "**schl**eep". Indonesian children may say "sempit" as / ?mpIt/ meaning narrow. /s/ and / / are the sounds that appear almost the same. Both of them are fricative, laminopalatal, and voiceless,

2. Substitution

Substitution is type of articulation error in which one or more sound is substituted for another. Substitution is relatively common and normal in the speech of young children and the most frequent type of articulation error in school-age children. Substitution usually changes one distinctive phoneme (not two or more phonemes) in another phoneme. For example, the word /tu**h**an/ becomes /tu**f**an/. The other example is "**cr**ane" for "**tr**ain".

3. Addition

Addition is an articulation error in which a phoneme or an extra sound is added. This type of error seldom occurs and is not always considered an articulation error. For example, /**str?**b?ri/ becomes /**s?t?**b?ri/. The other example is /p?la?i/ becomes /p?la?i**t**/.

4. Omission

Omission is an articulation error which occurs when particular phonemes in a particular position are deleted. An Omission is most common in the initial position of words and occurs less frequently in the medial position. For example /**k**ucI?/ is pronounced as /ucI?/. Omission rarely occurs in the speech of children ready for preschool.

E. Indonesian Consonant System and Distribution

1. Consonant

Speech sounds are produced by speech organs, such as: tongue, lips, and teeth. These organs are called articulators. Ramelan says that producing consonant involves three factors; they are: point of articulation, manner of articulation, and vocal cords (2003:100). Point of articulation is the place where the optium obstruction takes place. The second factor is manner of articulation, which is the

way in which the air is obstructed by the articulators and usually it is accompanied by the movement of the vocal cords. The vocal cords are used to obstruct the air above the larynx. If the vocal cords are vibrating the sounds produced are voiced, whereas if the vocal cords do not vibrate, the sounds produced are voiceless.

2. Types of Consonant

Abdul Chaer states that there are 24 consonants in Indonesian (2009:50). The classification of the consonants is based on three factors, viz. the voicing state, the place of articulations, and the manner of articulation.

(1). Based on the voicing state, Indonesian consonants can be classified into two categories; they are:

(a).Voiced consonants: /b/, /d/, /g/,/?/, /j/, /v/, /z/, / /,/x/,/h/.

(b).Voiceless consonants: /p/, /t/, /k/, /c/, /s/, /f/.

(2). Based on the place of articulations, Indonesian consonant can be classified into eight categories, namely:

(a). Bilabials: /p/, /b/, /m/, /w/

(b). Labiodentals: /f/, /v/

(c). Apicoalveolar: /d/, /t/, /n/, /l/, /r/.

(d). Laminoalveolar: /z/, /y/.

(e). Laminopalatal: /ñ/, /j/, /c/, / /, /s/.

(f). Dorsovelar: /g/, /k/, /?/, /x/.

(h). Laringal: /h/

(i). Glottal: /? /

(3). Based on the manner of articulation, Indonesian consonant can be classified into seven categories, those are:

(a).Plosive: /p/, /b/, /t/, /d/, /k/, /g/, /?/.

(b). Nasal: /m/, /n/, /?/, /?/

(c). Africate: /j/, /c/.

(d). Lateral: /l/

(e). Fricatives: /f/. /v/, /z/, /s/, / /,/h/, /x/.

(f). Trill: /r/

(g).Semivowel: /y/, /w/

Below is phonetic chart of Indonesian consonant by Abdul Chaer (2009:72)

3. Consonant Clusters

Consonant is one of linguistic features. Ramelan says that the term consonant is negatively defined, that is, sounds which are not vowels are consonants (1994:99). A cluster is a group of the same or similar elements occurring closely together (Hornby, 1995:213). In other words, a consonant cluster is a group or sequence of consonant that appears together in a syllable without a vowel between them. Chaer stated that In Indonesian there are 27 kinds of consonant clusters, namely: /br/,/bl,/by/,/dr/,/dw/,/dy/,/fl/,/fr/,/gl/,/gr/,/kl/,/kr/,/ks/,/kw/,/pr/,/ps/,/sl/,/sp/,/spr/,/sr/,/st/,/str/,/sw/,/sk/,/skr/,/tr/,/ty/(2009:84). Below is the chart of the position of the clusters in words (Chaer, 2009:93-94)

F. Development of Children in Producing Clusters

Trends of the typical consonant cluster development stated by McLeod *et al*., (2001: 99-110) are as follows:

a. Children aged two should be able to produce consonant clusters.
b. The words containing clusters in final position turn up earlier than initial ones.
c. Consonant clusters which are containing two elements are produced earlier than three-element clusters.
d. Consonant clusters containing stops (e.g., /pl/, /kw/) generally appear in inventories earlier before consonant clusters containing fricatives, for examples: /st/, /?r/.
e. Children usually omit one element of a consonant cluster (cluster reduction), e.g. the word /**tr?**mp?t/ becomes /**t?**mp?t/, /**ku**/ instead of /**sk**ul/.
f. A number of young children realize consonant clusters by using "strategy" and the most common one is cluster simplification.
g. The acquisition of consonant clusters is developing gradually.
h. Cluster reduction, cluster simplification and correct productions of consonant clusters relate one another. Initially, most children reduce consonant clusters. Cluster reduction is gradually decreasing, while the occurrence of cluster simplification increases.
i. The acquisition of consonant clusters is marked by reversals and revisions which vary from one child to other children.